

Chapter : 6. COORDINATE GEOMETRY

Exercise : 6A

Question: 1

Write down

Solution:

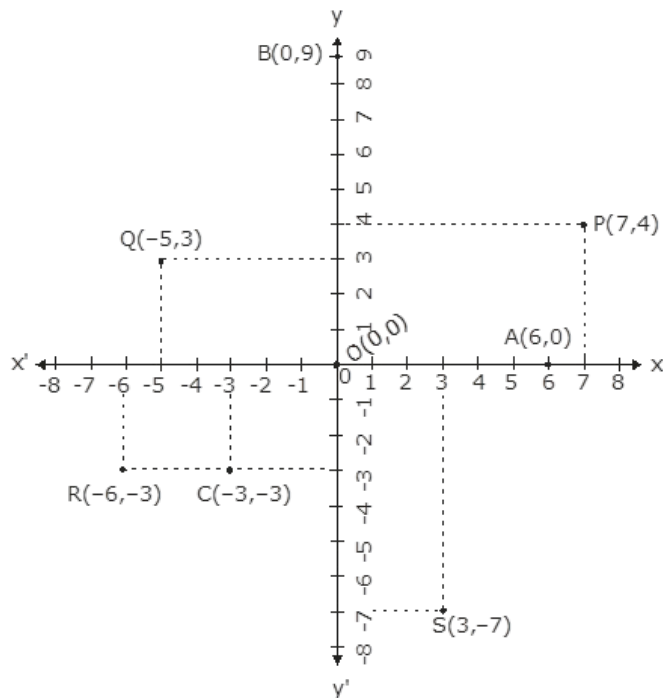
Co-ordinates of A, B, C, D and E are as follows,

A(-6, 5), B(5, 4), C(-3, 2), D(-2, 2), E(-1, 4)

Question: 2

Draw the li

Solution:



Question: 3

On which ax

Solution:

- (i) (7, 0) lies on X-axis.
- (ii) (0, -5) lies on negative or Y-axis.
- (iii) (0, 1) lies on positive Y-axis.
- (iv) (-4, 0) lies on negative X-axis.

Question: 4

In which qu

Solution:

- (i) In given points X co-ordinate is negative and Y co-ordinate is positive, Hence, (-6, 5) lies in 2nd quadrant.
- (ii) In given points X co-ordinate is negative and Y co-ordinate is also negative, Hence, (-3, -2) lies in 3rd quadrant.

(iii) In given points X co-ordinate is positive and Y co-ordinate is negative, Hence, (2, -9) lies in 4th quadrant.

Question: 5

Draw the gr

Solution:

The given equation is $y = x + 1$ (i)

Now,

By putting $x = 0$ in equation (i), we get $y = 1$

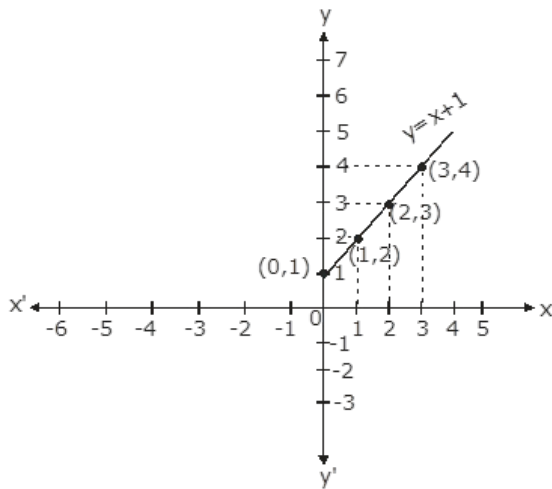
By putting $x = 1$ in equation (i), we get $y = 2$

By putting $x = 2$ in equation (i), we get $y = 3$

By putting $x = 3$ in equation (i), we get $y = 4$

A table is form such that:

X	0	1	2	3
Y	1	2	3	4



Question: 6

Draw the gr

Solution:

The given equation is $y = 3x + 2$ (i)

Now,

By putting $x = -1$ in equation (i), we get $y = -1$

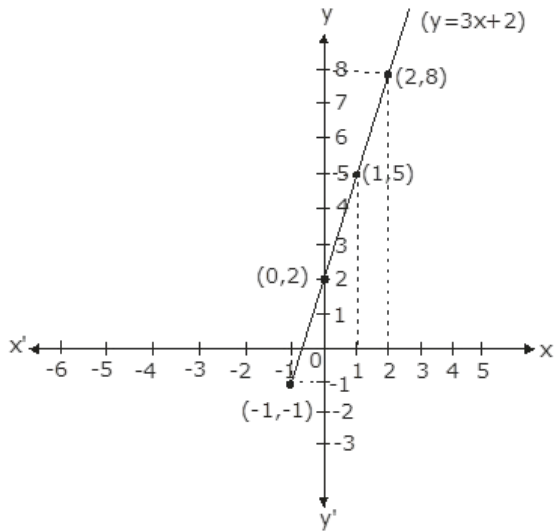
By putting $x = 0$ in equation (i), we get $y = 2$

By putting $x = 1$ in equation (i), we get $y = 5$

By putting $x = 2$ in equation (i), we get $y = 8$

A table is form such that:

X	-1	0	1	2
Y	-1	2	5	8



Question: 7

Draw the gr

Solution:

The given equation is $y = 5x - 3$ (i)

Now,

By putting $x = 0$ in equation (i), we get $y = -3$

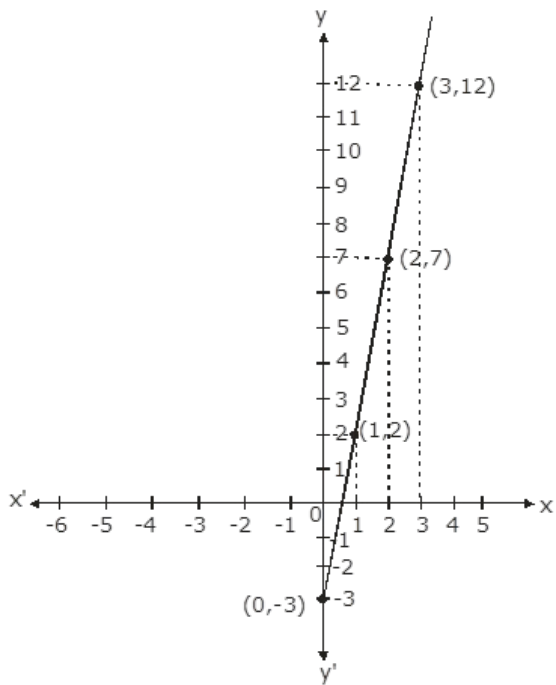
By putting $x = 1$ in equation (i), we get $y = 2$

By putting $x = 2$ in equation (i), we get $y = 7$

By putting $x = 3$ in equation (i), we get $y = 12$

A table is form such that :

x	0	1	2	3
y	-3	2	7	12



Question: 8

Draw the gr

Solution:

The given equation is $y = 3x$ (i)

Now,

By putting $x = 0$ in equation (i), we get $y = 0$

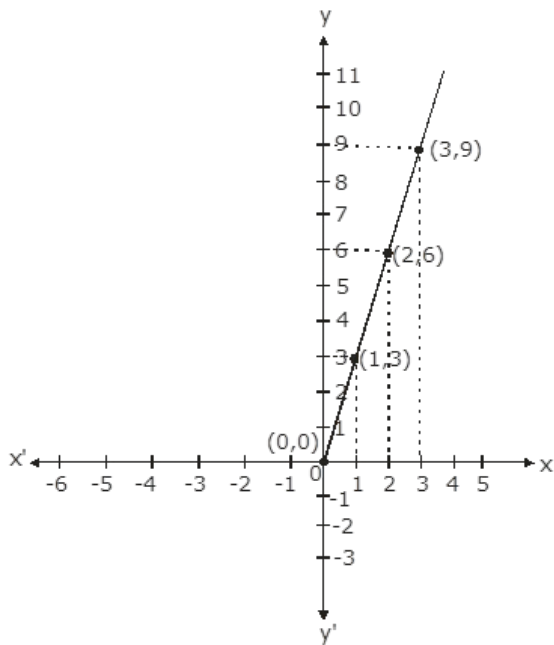
By putting $x = 1$ in equation (i), we get $y = 3$

By putting $x = 2$ in equation (i), we get $y = 6$

By putting $x = 3$ in equation (i), we get $y = 9$

A table is form such that:

X	0	1	2	3
Y	0	3	6	9



Question: 9

Draw the gr

Solution:

The given equation is $y = -x$ (i)

Now,

By putting $x = -2$ in equation (i), we get $y = 2$

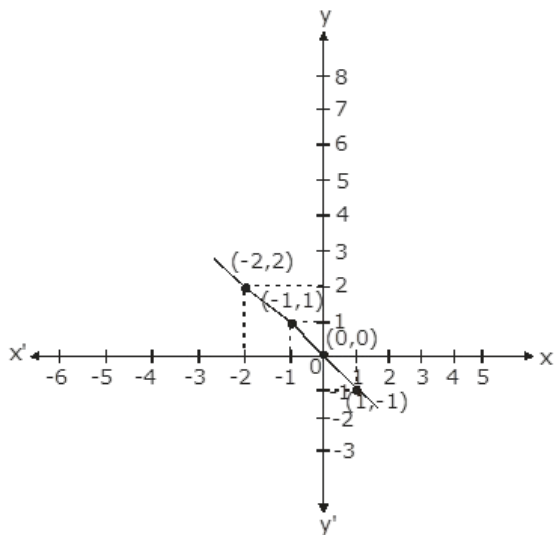
By putting $x = -1$ in equation (i), we get $y = 1$

By putting $x = 0$ in equation (i), we get $y = 0$

By putting $x = 1$ in equation (i), we get $y = -1$

A table is form such that:

X	-2	-1	0	1
Y	2	1	0	-1



Exercise : CCE QUESTIONS

Question: 1

The point lies P

Solution:

We can see that, x - coordinate is negative and y- coordinate is positive.

Hence, it can be clearly said that P (-5,3) lies in the 2nd quadrant.

∴ Option B is correct

Question: 2

The point Q (4, -

Solution:

We can see that, x - coordinate is positive and y- coordinate is negative.

Hence, it can be clearly said that Q (4,-6) lies in the 4th quadrant.

∴ Option D is correct.

Question: 3

The point Q (0, -

Solution:

We can see that, x - coordinate is zero and y- coordinate is negative.

Hence, it can be clearly said that Q (0,-4) lies on the y axis.

∴ Option D is correct.

Question: 4

The point B (8, 0

Solution:

We can see that, x - coordinate is positive and y- coordinate is zero.

Hence, it can be clearly said that B (8,0) lies on the x axis.

∴ Option C is correct.

Question: 5

The point C(-6, 0

Solution:

We can see that, x - coordinate is negative and y- coordinate is zero.

Hence, it can be clearly said that C(-6,0) lies on the x axis.

∴ Option C is correct.

Question: 6

The point at whic

Solution:

Origin is the point of intersection of the two coordinate axes.

∴ Option C is correct.

Question: 7

If $x > 0$ and y

Solution:

We have, $x > 0$ and $y < 0$

$\therefore x$ is positive and y is negative

= point $(x, -y)$ lies in 4th quadrant

\therefore Option D is correct.

Question: 8

The points (other

Solution:

We know that abscissa and ordinate can be equal in only two cases i.e.

i. x and y both are positive

ii. x and y both are negative

\therefore The points will lie in the 1st and 3rd quadrants only.

\therefore Option C is correct.

Question: 9

The point in whic

Solution:

We know that abscissa and ordinate can have different signs in only two cases i.e.

i. x is negative and y is positive

ii. x is positive and y is negative

\therefore The points will lie in the 2nd and 4th quadrants only.

\therefore Option C is correct.

Question: 10

The perpendicular

Solution:

Since, we have the point A (7, 5)

And we have to find its perpendicular distance from y-axis

\therefore The perpendicular distance will be the x- coordinate

Hence, it is 7 units.

\therefore Option A is correct.

Question: 11

A point both of w

Solution:

We have, both the coordinates are negative i.e.

x and y both are negative

Hence, the point lies in the 3rd quadrant.

\therefore Option C is correct

Question: 12

Abscissa of a poi

Solution:

We have, (x, y)

Where, x is positive

Hence it may lie in either 1st or 4th quadrant.

∴ Option D is correct.

Question: 13

The coordinates o

Solution:

Here, abscissa of A = 3

Abscissa of B = -2

According to the question,

$$(\text{abscissa of A}) - (\text{abscissa of B}) = 3 - (-2)$$

$$= 3 + 2 = 5$$

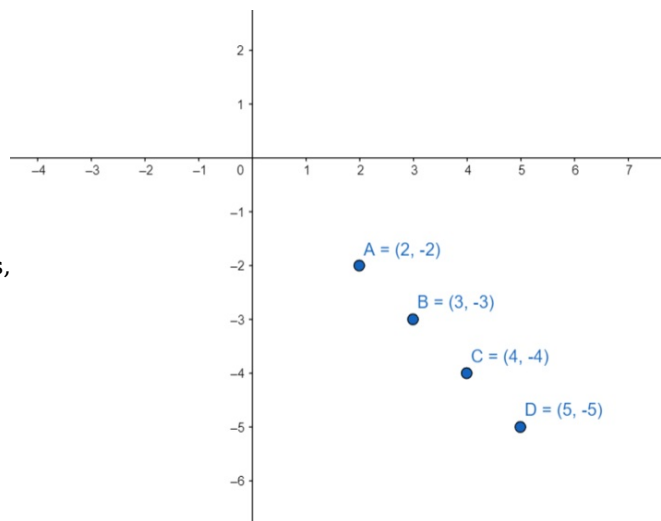
∴ Option C is correct.

Question: 14

The points A(2, -

Solution:

Let us see the plot of these points,



Since, all

the given points have their x - coordinate positive and y - coordinate negative.

Hence, all these points lie in the 4th quadrant. And also they all lie in a straight line.

∴ Option C is correct

Question: 15

Which of the poin

Solution:

We know that, a point can only lie on x -axis if its y coordinate is 0.

Hence, points A, C and E does not lie on x -axis

∴ Option C is correct

Question: 16

The signs of absc

Solution:

Since, in the 2nd quadrant x is negative and y is positive

Hence, as per sign the point could be written as $(-, +)$

\therefore Option B is correct.

Question: 17

Which of the foll

Solution:

We have,

$$y = 3x + 4 \text{ (i)}$$

a. $(1, 7)$ [putting $x = 1$ and $y = 7$ in (i)]

$$7 = 3(1) + 4$$

$$7 = 7$$

Thus, A lies on the line.

b. $(2, 10)$ [putting $x = 2$ and $y = 10$ in (i)]

$$10 = 3(2) + 4$$

$$10 = 10$$

Thus, B lies on the line.

c. $(-1, 1)$ [putting $x = -1$ and $y = 1$ in (i)]

$$1 = 3(-1) + 4$$

$$1 = 1$$

Thus, C lie on the line.

d. $(4, 12)$ [putting $x = 4$ and $y = 12$ in (i)]

$$12 = 3(4) + 4$$

$$12 \neq 16$$

Thus, D does not lie on the line.

\therefore Option D is correct

Question: 18

Which of the foll

Solution:

We have, $y = 2x + 3$ (i)

a. $(2, 8)$ [putting $x = 2$ and $y = 8$ in (i)]

$$8 = 2(2) + 3$$

$$8 \neq 7$$

Thus, A doesn't lie on the line.

b. $(3, 9)$ [putting $x = 3$ and $y = 9$ in (i)]

$$9 = 2(3) + 3$$

$$9 = 9$$

Thus, B lies on the line.

\therefore Option B is correct.

Question: 19

If $a < 0$ and b

Solution:

We have, $a < 0$ and $b < 0$

i.e. both x and y are negative

Hence, point P lies in 3rd quadrant

\therefore Option C is correct.

Question: 20

The perpendicular

Solution:

Since, we have the point $P(4, 3)$

And we have to find its perpendicular distance from y -axis

\therefore The perpendicular distance will be the x -coordinate

Hence, it is 4 units.

\therefore Option B is correct

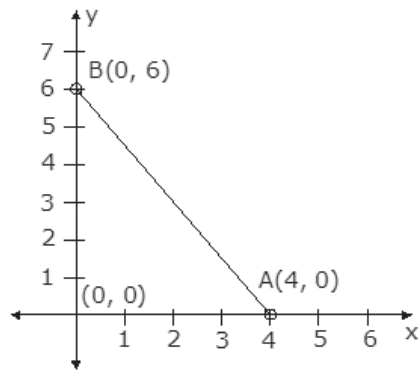
Question: 21

The area of the Δ

Solution:

Here, $OA = 4 - 0 = 4$ units

$OB = 6 - 0 = 6$ units



$$\therefore \text{Area}(\Delta OAB) = \frac{1}{2} \times OA \times OB$$

$$= \frac{1}{2} \times 4 \times 6$$

$$= 12 \text{ sq. units}$$

\therefore Option B is correct.

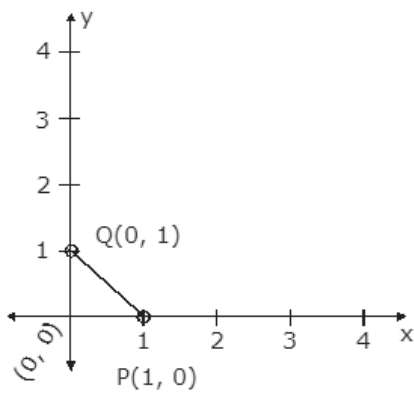
Question: 22

The area of the Δ

Solution:

Here, $OA = 4 - 0 = 4$ units

$OB = 6 - 0 = 6$ units



$$\therefore \text{Area}(\triangle OAB) = \frac{1}{2} \times OA \times OB$$

$$= \frac{1}{2} \times 4 \times 6$$

$$= 12 \text{ sq. units}$$

\therefore Option B is correct

Question: 23

Consider the thre

Solution:

Here,

1st statement is true as the point lying on x axis has its y coordinate as 0

2nd statement is true as the point lying on y axis has its x coordinate as 0

3rd statement is false as a point can never lie on both the axes unless it is their point of intersection i.e. (0, 0)

\therefore Option A is correct

Question: 24

The questio

Solution:

We have, pb(-3, 0)

Since, the y coordinate is 0.

Hence, it lies on x-axis.

\therefore Option (a) is correct.

Question: 25

The questio

Solution:

We have,

Point O(0, 0)

It does not lie in any of the quadrant because it is the point of intersection of both the axes.

\therefore Option (d) is the correct option.

Question: 26

The questio

Solution:

We know that,

The point P (-6, -4) lies in the third quadrant as the points of the type (-, -) lie in III quadrant

Also, we know that

The signs of points in quadrants I, II, III and IV are respectively (+,+) (-,+) (-,-) and (+,-)

∴ Both assertion and reason are true and reason justifies the assertion

Hence, option (a) is correct

Question: 27

The questio

Solution:

According to question,

If $a \neq b$ then $(a, b) \neq (b, a)$

This statement is true

Also, (4, -3) lies in the quadrant IV

As both assertion and reason are true but the reason does not justify the assertion

Hence, option (b) is correct

Question: 28

Write whether the

Solution:

(i) The given statement is false as the ordinate of the point P (6, 0) is 0 and hence it lies on the x-axis

(ii) The given statement is also false because the perpendicular distance of the point A (5, 4) from the x-axis will be 4 units instead of 5 units

Question: 29

State whether tru

Solution:

(i) The given statement is false because the mirror image of the point A (4, 5) on the x-axis is A' (4, -5) instead of A' (-4, 5)

(ii) The given statement is true as the mirror image of the point A (4, 5) in the y-axis is A' (-4, 5)

Question: 30

Write whether the

Solution:

A. The given statement is true as the ordinate of the point is 0 which lies on the x-axis

B. The given statement is false as the point (0, -3) lies on the y-axis

Question: 31

Match the followi

Solution:

(a) We know that,

The points that lie on the x-axis have coordinate = 0

∴ The equation of the x-axis will be $y = 0$

(b) We know that,

The points that lie on the y-axis have abscissa = 0

∴ The equation of the y-axis will be $x = 0$

(c) We know that,

Any point on the x-axis is of the form $(a, 0)$

(d) We also know that,

A point on the y-axis is of the form $(0, b)$

Hence the correct match for the given table is as follows:

(a) - (q)

(b) - (s)

(c) - (p)

(d) - (r)

Question: 32

Match the followi

Solution:

(a) We know that,

The point of the type $(a, 0)$ lies on the x-axis

∴ Point A $(-3, 0)$ lies on the x-axis

(b) We know that,

The point of the type $(-, -)$ lie in the III quadrant

∴ Point B $(-5, -1)$ lies in the quadrant III

(c) We know that,

The point of the type $(+, -)$ lie in the quadrant IV

∴ Point C $(2, -3)$ lies in the quadrant IV

(d) We know that,

The point of the type $(0, b)$ lies on the y-axis

∴ Point D $(0, -6)$ lies on the y-axis

Hence, the correct match for the above given table is as follows:

(a) - (s)

(b) - (r)

(c) - (q)

(d) - (p)

Question: 33

Without plotting

Solution:

A. We know that,

Point $(-3, 6)$ lie in the second quadrant

B. We know that,

Point $(4, -6)$ lie in the fourth quadrant

C. We know that,

Point $(-5, -7)$ lie in the third quadrant

D. We know that,

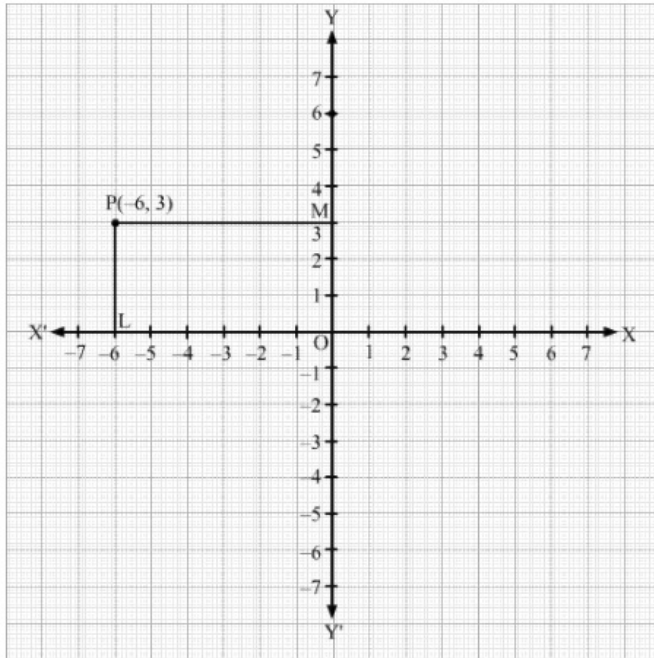
Point (5, 3) lie in the first quadrant

Question: 34

Plot the point P(

Solution:

The required point is shown in the graph given below:



In the above graph PL is drawn perpendicular to x-axis while PM is drawn perpendicular to y-axis

\therefore Coordinates of L = (-6, 0)

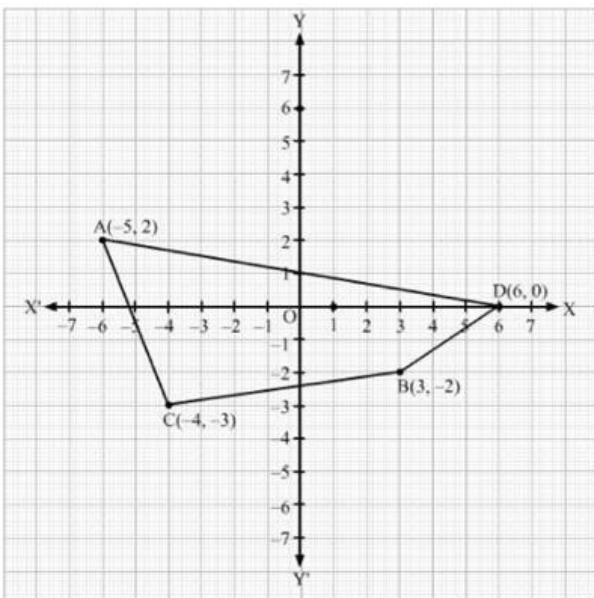
Also, coordinates of M = (0, 3)

Question: 35

Plot the points A

Solution:

The given four points A (-5, 2), B (3, -2), C (-4, -3) and D (6, 0) are plotted on the graph paper as follows:

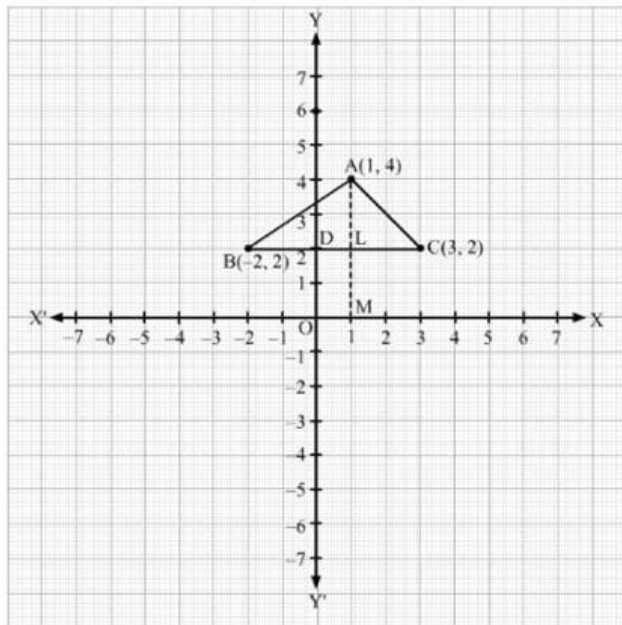


Question: 36

The three vertice

Solution:

Let the vertices of the triangle be A (1, 4), B (-2, 2) and C (3, 2)



Now, when we plot and join these points on the graph paper, we get a triangle ABC

Let the line BC intersect y-axis at D

$$\therefore BC = BD + DC$$

$$= (2 + 3) \text{ units}$$

$$= 5 \text{ units}$$

Now, AL is drawn perpendicular to x-axis meeting BC at L

$$\therefore \text{Ordinate of point L} = \text{Ordinate of point C} - 2$$

$$AL = AM - LM$$

$$= 4 - 2$$

$$= 2 \text{ units}$$

$$\text{Hence, area of } \triangle ABC = \frac{1}{2} \times BC \times AL$$

$$= \frac{1}{2} \times 5 \times 2$$

$$= \frac{1}{2} \times 10$$

$$= 5 \text{ units}$$

$$\therefore \text{Area of the triangle ABC} = 5 \text{ square units}$$

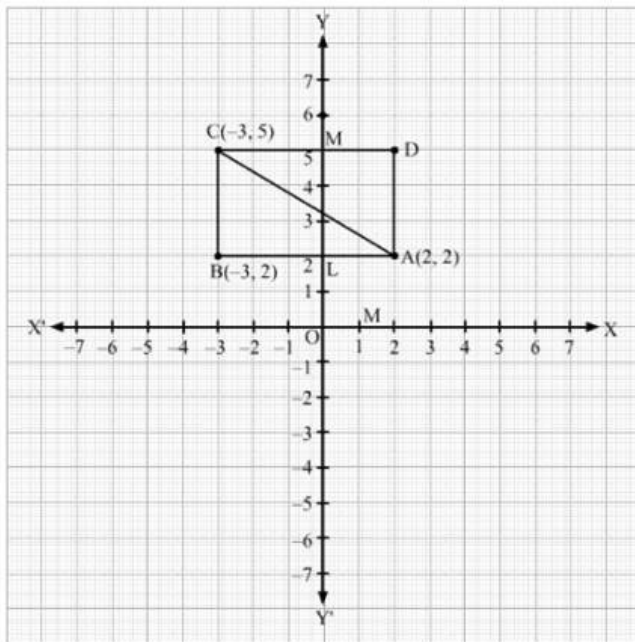
Question: 37

The three vertice

Solution:

Let the three vertices of rectangle ABCD be A (2, 2), B (-3, 2) and C (-3, 5)

Now, on plotting these points on the graph paper and by joining the points we get:



The point A lies in the first quadrant while B and C lie in the second quadrant

Let us assume D be the fourth vertex of the rectangle

\therefore Abscissa of D = Abscissa of A = 2

And, Ordinate of D = Ordinate of C = 5

Hence, Coordinate of the fourth vertex, D = (2, 5)

Let y-axis cut AB and CD at point L and M respectively

\therefore AB = (BL + LA)

= (3 + 2)

= 5 units

Also, BC = 5 - 2

= 3 units

\therefore Area of rectangle ABCD = BC \times AB

= 3 \times 5

= 15 square units

Hence, the area of the rectangle ABCD is 15 square units

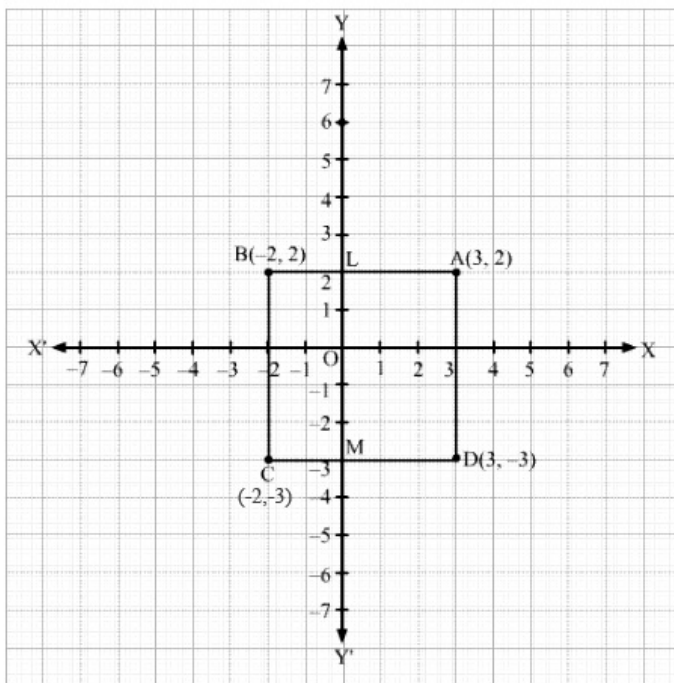
Question: 38

The three vertices

Solution:

Let the three vertices of rectangle ABCD be A (3, 2), B (-2, 2) and D (3, -3)

Now, on plotting these points on the graph paper and by joining the points we get:



A, B and D lie in different quadrants

Let us assume D be the fourth vertex of the rectangle

\therefore Abscissa of C = Abscissa of B = - 2

And, Ordinate of C = Ordinate of D = - 3

Hence, Coordinate of the fourth vertex, C = (-2, -3)

Let y-axis cut AB and CD at point L and M respectively

\therefore AB = (BL + LA)

= (2 + 3)

= 5 units

\therefore Area of rectangle ABCD = AB \times AD

= 5 \times 5

= 25 square units

Hence, the area of the rectangle ABCD is 25 square units

Question: 39

From the figure g

Solution:

(i) We have,

Abscissa of point D = 0

Ordinate of point D = -5

\therefore Coordinates of point D = (0, -5)

(ii) From the given graph, we have:

Abscissa of point A = - 4

(iii) From the given graph, we have:

Coordinates of point E = (2, -3)

(iv) From the given graph, we have:

Coordinates of point C = (-3, -4)

(v) From the given graph, we have:

Ordinate of point E = - 3

(vi) From the given graph, we have:

Point B lies on x-axis

\therefore Abscissa of point B = - 2

Ordinate of point B = 0

Hence coordinates of point B are (-2, 0)

(vii) From the given graph, we have:

Abscissa of point F = 5

Ordinate of point F = - 1

(viii) From the given graph, we have:

Coordinates of the origin = (0, 0)

Exercise : FORMATIVE ASSESSMENT (UNIT TEST)

Question: 1

If $x < 0$ and y

Solution:

According to question, we have

$x < 0$ and $y > 0$ then these points will lie in second quadrant

As, points of the type $(-, +)$ lie on the second quadrant

\therefore Option B is correct

Question: 2

Which point does

Solution:

From the given options in the question the point which does not lie in any quadrant is (0, 3)

\therefore Option D is correct

Question: 3

The area of $\triangle AOB$

Solution:

When we plot the given points in the graph paper then,

$\triangle AOB$ is the right angle triangle, where

OB = Base = 6 units

Height of triangle = OA = 6 units

\therefore Area of $\triangle AOB = \frac{1}{2} \times OA \times OB$

$$= \frac{1}{2} \times 6 \times 6$$

$$= \frac{1}{2} \times 36$$

= 18 square units

\therefore Option C is correct

Question: 4

Read the statemen

Solution:

We know that,

Any point which lies on the x-axis is of the form $(x, 0)$ for x

Also, point which lies on the y-axis is of the form $(0, y)$ for y

Hence, statement I and II are true

\therefore Option A is correct

Question: 5

Which of the foll

Solution:

From the given four options, $(-5, 5)$ does not satisfy the given equation:

$$3x = 2x - 5$$

We have,

$$\text{R.H.S} = 2 \times (-5) - 5$$

$$= -10 - 5$$

$$= -15$$

$$\text{Also, L.H.S} = 3 \times 5$$

$$= 15$$

Hence, the point $(-5, 5)$ does not lie on the line $3y = 2x - 5$

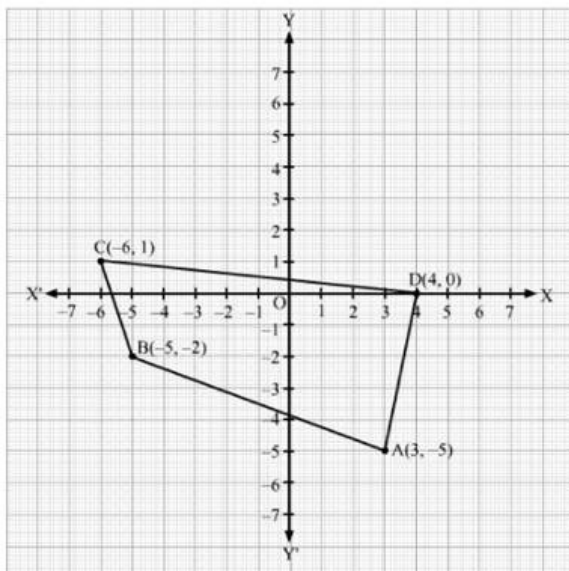
\therefore Option D is correct

Question: 6

Plot each of the

Solution:

The following given points are plotted on the graph paper as follows:

**Question: 7**

If $2y = 3 - 5x$, f

Solution:

We have,

$$2y = 3 - 5x$$

Now, by putting the value of $x = -1$ in the given equation we get:

$$2y = 3 - 5 \times (-1)$$

$$2y = 3 + 5$$

$$2y = 8$$

$$y = \frac{8}{2} = 4$$

Hence, when $x = -1$ then $y = 4$

Question: 8

On which axis does

Solution:

We have,

Abscissa of point A (0, -4) = 0

\therefore Point A lies on the y-axis

Question: 9

In which quadrant

Solution:

From the given point given in the question, we have

The abscissa and the ordinate of the point B (-3, -5) are negative and we know that those points lie on the III quadrant

\therefore Point B lies in the third quadrant

Question: 10

What is the perpendicular

Solution:

We have,

Abscissa of point P (-2, -3) = -2

We know that, distance cannot be negative

\therefore The perpendicular distance of the given point from the y-axis is 2 units

Question: 11

At what point do

Solution:

The coordinate axes meet at the origin i.e., at point O (0, 0)

Question: 12

For each of the following

Solution:

(i) The given statement is false as the given point lies on the x-axis

(ii) The given statement is also false as the point is P (-4, -3)

(iii) The given statement is also false as the point A (1, -1) lies in the quadrant IV and point B (-1, 1) lies in the quadrant II

(iv) The given statement is false as the coordinates of the point are (0, 3)

(v) The given statement is true as the point C (0, -5) lies on y-axis

(vi) The given statement is also true as the point O (0, 0) lies on x-axis as well as y-axis

Question: 13

Taking a suitable

Solution:

The concept is:

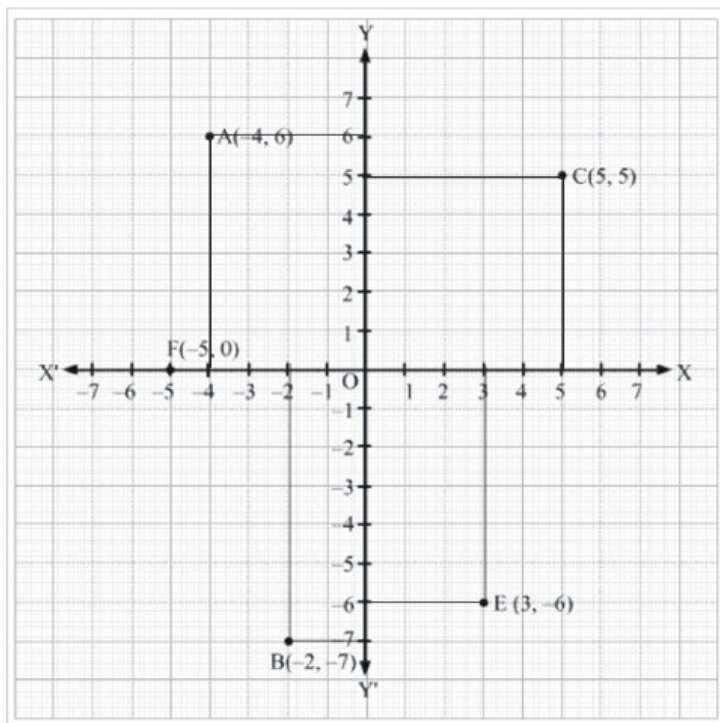
$(+x, +y) \Rightarrow 1^{\text{st}}$ Quadrant

$(-x, +y) \Rightarrow 2^{\text{nd}}$ Quadrant

$(-x, -y) \Rightarrow 3^{\text{rd}}$ Quadrant

$(+x, -y) \Rightarrow 4^{\text{th}}$ Quadrant

The given points are plotted as follows:



Question: 14

Read the graph pa

Solution:

(i) The given four points G (-3, 0) , H (-8, 0), Q (4, 0) and R (9, 0) lie on the x-axis

\therefore Their ordinates are equal to 0

(ii) The given four points L (0, -6) , K (0, -2), D (0, 3) and C (0, 7) lie on the y-axis

\therefore Their abscissa are equal to 0

(iii) The ordinates of points M (-1, 3) , J (-4, -3) and P (6, 3) are equal to -3

(iv) Points having abscissa equal to 2 is B (2, 4) and N (2, -1)

(v) From the given points, points E and F lie in quadrant II

\therefore Coordinates of E = (-4, 4)

Coordinates of F = (-6, 2)

(vi) Coordinates of all those points having abscissa and ordinate same value are:

A (3, 3) and I (-2, -2)

Question: 15

(i) Write the mir

Solution:

(i) The mirror image of the point (2, 5) in the x-axis is (2, -5)

(ii) The mirror image of the point (3, 6) in the y-axis is (-3, 6)

(iii) According to question,

Point (a, b) lies in the second quadrant so a must be a negative number and b must be a positive number

\therefore Point (b, a) lies in the fourth quadrant

Question: 16

Without plotting

Solution:

The concept is:

$(+x, +y) \Rightarrow 1^{\text{st}}$ Quadrant

$(-x, +y) \Rightarrow 2^{\text{nd}}$ Quadrant

$(-x, -y) \Rightarrow 3^{\text{rd}}$ Quadrant

$(+x, -y) \Rightarrow 4^{\text{th}}$ Quadrant

(i) Points having ordinate = 4 and abscissa = - 3 lies in the quadrant II

(ii) Points having ordinate = - 5 and abscissa = 4 lies in the quadrant IV

(iii) Points having ordinate = - 2 and abscissa = - 1 lies in the quadrant III

(iv) Points having ordinate = 3 and abscissa = - 5 lies in the quadrant II

(v) Points having ordinate = 1 and abscissa = 2 lies in the quadrant I

(vi) Points having ordinate = - 4 and abscissa = 7 lies in the quadrant IV

Question: 17

Which of the foll

Solution:

From the points given in the question, we have

Points B (2, 0) and D (6, 0) have their ordinates = 0

\therefore They lie on the point x-axis

And the point whose ordinate is not equal to zero does not lie on the x-axis

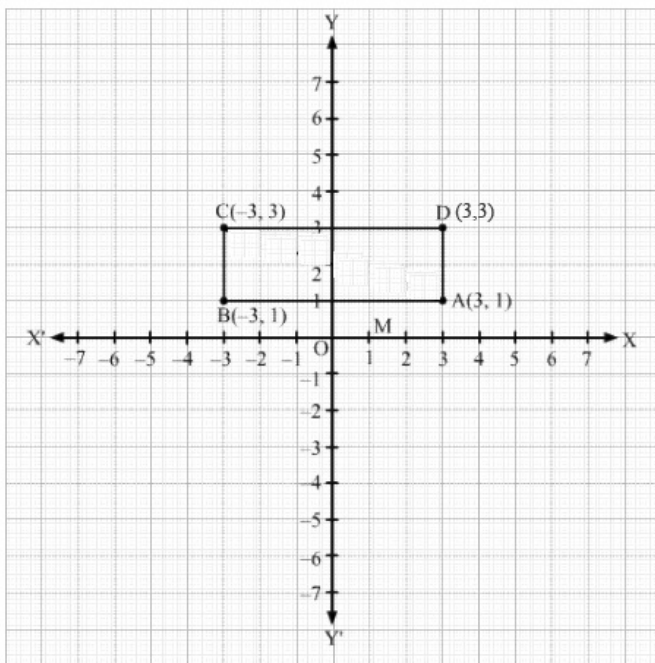
\therefore Points A, C, E and F do not lie on the x -axis

Question: 18

Three vertices of

Solution:

Let the three vertices of rectangle ABCD be A (3, 1), B (-3, 1) and C (-3, 3)



Now, on plotting these points on the graph paper and by joining the points we get:

A lies in the first quadrant while B and C lie in the second quadrant

Let us assume D be the fourth vertex of the rectangle

\therefore Abscissa of D = Abscissa of A = 3

And, Ordinate of D = Ordinate of C = 3

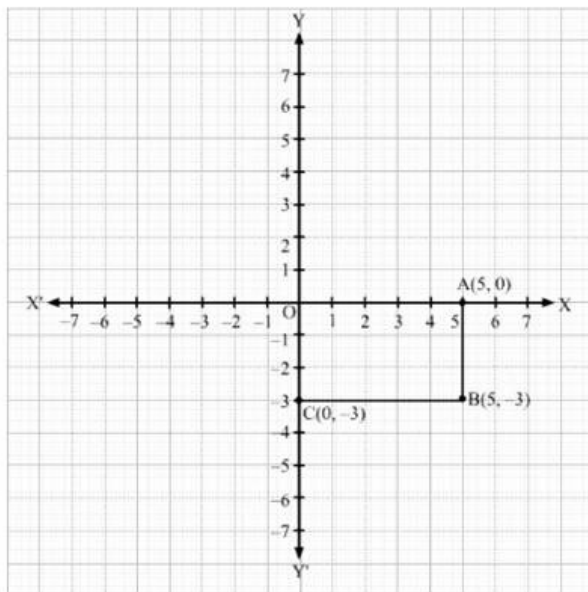
Hence, Coordinate of the fourth vertex, D = (3, 3)

Question: 19

Write the coordinates

Solution:

It is given in the question that,



OABC is a rectangle where O is the origin and OA = 5 units along x-axis

Also, AB = 3 units and B lies in the fourth quadrant

Now, coordinates of origin, O = (0, 0)

As point A lies on the x-axis

\therefore Coordinate of point A = (5, 0)

Also, point B lies in the fourth quadrant

So, coordinate of point B will be negative

As the given width AB = 3 units

\therefore Coordinates of point B = (5, -3)

Also, point C and O lies on the same line

Thus, abscissa of C = abscissa of O = 0

Similarly, Point C and B lies on the same altitude

Hence, both points have equal altitude

\therefore Coordinates of C = (0, -3)

Hence, the coordinates of the vertices of the given rectangle are:

O (0, 0), A (5, 0), B (5, -3) and C (0, -3)

Question: 20

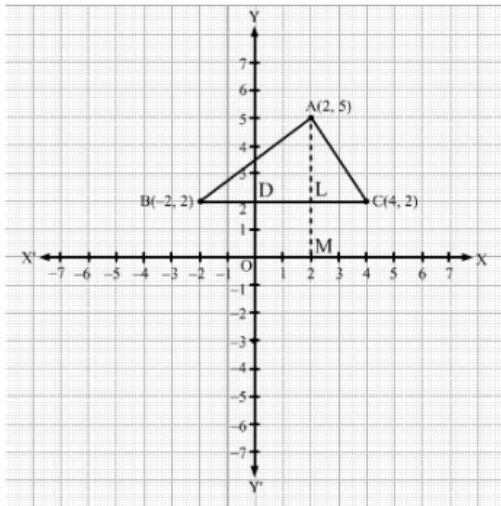
Plot the points A

Solution:

Let the three vertices of triangle ABC be:

A (2, 5), B (-2, 2) and C (4, 2)

Now, when we plot these points in the graph paper then we see that,



Point A and C lie in the quadrant I and point B lie in the II quadrant

Let the line BC intersect y-axis at point D

$$\therefore BC = (BD + DC)$$

$$= (2 + 4) \text{ units}$$

$$= 6 \text{ units}$$

Now, we have to draw AM perpendicular to x-axis and intersect BC at L

$$\therefore \text{Ordinate of point L} = \text{Ordinate of point B} - \text{Ordinate of point C}$$

$$AL = AM - LM$$

$$= 5 - 2$$

$$= 3 \text{ units}$$

Hence, Area of triangle ABC = $\frac{1}{2} \times BC \times AL$

$$= \frac{1}{2} \times 6 \times 3$$

$$= \frac{1}{2} \times 18$$

$$= 9 \text{ square units}$$

\therefore Area of triangle ABC = 9 square units